Ref-34-21

1198010003/MADISON
HARTFORD/CHEMETCO
RCRA Closure

RCRA Closure Plan
Brick Shop Container Storage Area

Location: Estate of Chemetco, Inc.
3754 Chemetco Lane
Hartford, IL 62048

Prepared by: Gary J. Davis, CHMM
EH&S Manager

Date: January 29, 2008

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1.0 Introduction

1.1 Purpose

This document presents a closure plan for a container storage area in the Brick Shop used for storage of hazardous process solutions and solids generated by a Pilot Plant to develop a process to extract valuable metals from scrubber sludge stockpiled on the Bankruptcy Estate of Chemetco, Inc. former smelter site. The closure plan is to clean close this area as part of the response actions to address violations cited in Illinois Environmental Protection Agency (IEPA) Violation Notice Letter (VNL), dated October 10, 2007. IEPA identified the 800 sf area inside the Brick Shop as a Hazardous Waste Management Unit (HWMU).

1.2 Background

Metals Finance Corporation (MFC), a Canadian metals recycling company, in an agreement with the Estate operated a Pilot Plant located inside the Brick Shop, a 6,000 sf concrete and steel building in excellent condition, from 2005 until 2007. In 2007, MFC terminated its efforts to develop a process for extracting metals out Electrometals Technologies, Inc., an Australian metals recycling company, expressed interest in developing a process to extract metals from stockpiles at Chemetco and using the MFC Pilot Plant and evaluating the process solutions and solids in containers in the container storage area. The container storage area consisted of an area of approximately 600 sf where approximately 550 gallons of acid solutions containing dissolved metals, including lead and cadmium (See analytical results labeled as EMEW Soln, Attachment A.) were stored in a 350 gallon plastic tote and a 250 gallon plastic tank. The solutions are not a listed waste but is hazardous for lead and cadmium. In this area was stored approximately 800 pounds of process filter solids that were acidic and contained metal compounds, including lead and cadmium (See analytical results labeled as EMEW Solids, Attachment B) and stored in a plastic container with a covered lid. The solids are not a list waste but is hazardous for lead and cadmium. No significant spills or releases have occurred except for a small drip area, less than 1.0 sf, that had crystallized under a valve on a solution tank.

1.3 Action to Date

The week of October 15, 2007, Chemetco personnel transferred all of the solutions and solids to approved plastic 55-gallon drums. All containers in the container storage area and the drip area on the concrete floor were triple rinsed and wash waters transferred to approved 55-gallon drums. All drums were disposed as hazardous waste. The area is now bare concrete floor as it originally was.

1.4 Summary of Contents

In addition to the technical details of closure, this submission provides closure cost estimates and a schedule under which the Estate proposes to conduct closure activities. This plan has been developed in accordance with IEPA's *Guidance for Preparing RCRA Closure Plans*, dated July 2003.

1.5 Goals

This is a final closure of the container storage area which has no use at this time but is expected to be available for future use consistent with the rest of the Brick Shop.

A licensed professional engineer in the State of Illinois will certify that closure has been attained and a Certificate of Closure issued.

2.0 Facility Description

2.1 Overall Facility Description

The Chemetco facility is located within a primarily agricultural, commercial warehousing and light residential area south of Hartford, Illinois in unincorporated Madison County. The facility is bounded on the west by the Norfolk Southern railroad line and Highway 3, major, heavily traveled rail and highway routes; on the north by farmland owned by Chemetco and New Poag Road; on the east by farmland owned by the Estate and Old Alton Road; and on the south by wetlands, a tributary of Long Lake, filled areas and woodlands owned by the Estate and private farmland owned by Dave Mueller. The nearest residences are two dwellings to the north and one to the west, within 500 feet. The nearest other residences are over 1500 feet to the east and over 2500 feet to the southeast. The State of Illinois Lewis and Clark Center and park are located within 1000 feet to the northwest across Highway 3 (Figure 1). No other public facilities are within 1 mile of the facility. Newly developed commercial warehouses are located approximately ½ mile from the facility to the east. More specifically, the 41 acre facility is in the Southeast 1/4, Section 16, Township 4 North, Range 9 West of the Third Meridian in Madison County, Illinois (Figure 1).

Chemetco, Inc. is registered under the following environmental identification numbers:

USEPA ID No.: ILD 048843809
IEPA ID No. 1198010003

Chemetco is the site of a former secondary copper smelter that produced copper anodes and lead-tin ingots for commercial sales from scrap copper, lead and tin bearing materials and operated under SIC 3341-Secondary Smelting and Refining of Nonferrous Metals (NAICS 331423-Secondary Smelting, Refining, and Alloying of Copper).

The size of the Chemetco facility, where all smelting operations occurred (Figure 2) and where the container storage area is located, is 41.1 acres.

The Chemetco facility is considered by IEPA as an Interim Status RCRA Hazardous Waste Transportation, Storage and Disposal Facility due to a Part A application by Chemetco in the 1980's. The facility has been the subject of hazardous waste management violations since the 1980's and has at least five identified SWMU's that were ordered closed in a 1986 Consent Decree with IEPA but not units have ever been closed. It is understood that IEPA and USEPA believe that there are over dozen AOC's on the facility including the stockpiles of slag. In 1996, Chemetco was found to have illegally discharged hazardous waste on their property to Long Lake which lead to a major cleanup effort that was never closed. On October 31, 2001 ceased all operations on the facility and filed for Chapter 7 Bankruptcy protection. Laura K. Grandy was appointed the Trustee and administers the facility and all owned property today. The facility is under an IEPA Administrative Seal Order issued December 4, 2001, that remains in effect today. None of these issues appears to impact the container storage area closure plan due to its location inside a contained building that was not the site of any hazardous waste management activities, known to the Estate of Chemetco, Inc. (Estate).

2.2 Brick Shop Facility Description

The container storage area is located inside the Brick Shop in the northeast corner (Figure 3). The Brick Shop is a 50 foot wide by 80 foot long by 20 foot high fully enclosed building attached to the southwest corner of the Foundry Building. The Brick Shop was constructed with sealed-joint concrete floors and 5 foot high concrete walls with metal beams and siding finishing off the sides and a metal truss, flat roof. The building has a large electric roll-up garage door opening on the east and a standard door on the west. The

building is equipped with overhead lights, exhaust fans, gas heaters and major electrical power supplies. Well water was also accessible in the building. There are no drains, sumps or other pathways for materials to exit the interior of the building except the doorways. A former pre-fab storage container is located in the southeast corner. Steel racks on the west side still hold several metal refractory lined chutes used to convey molten metal in the smelter. The Brick Shop was originally used to reline these types of chutes and melt pots with refractory brick and mortar.

3.0 Description of Hazardous Waste Management Unit (HWMU)

3.1 Regulatory Status

The Pilot Plant operations in the Brick Shop were considered exempt from RCRA permitting until the Estate received an IEPA Violation Notification Letter (VNL), dated October 10, 2007. At that time the operation of the Pilot Plant and the container storage area had been in existence since 2005 and was well known to IEPA. As of the VNL, this position changed and the regulatory status of the container storage area changed to that of an HWMU and the RCRA permit was denied due to violation of 35 Ill. Adm. Code Part 722.134 (a).

3.2 HWMU Description

In 2005 the Brick Shop was cleaned out expect as described above, floors and walls washed with fire hoses and pressure washers for the installation of the MFC Pilot Plant. All Pilot Plant equipment and storage containers were placed on drip pads constructed of heavy plastic sheeting with 3 inch walls for containment. The container storage area (the HWMA of concern) was established in a 20 foot by 30 foot area along the north wall near the northeast corner of the building where totes, drums, a small plastic tank and a large plastic container were located to store excess process solutions and solids along with small plastic containers used in the processing (these were stored on plastic sheeting with absorbent pigs surrounding them). No significant spills or releases have occurred except for a small drip area, less than 1.0 sf, that had crystallized under a valve on a solution tank (See Section 1.2 Background).

3.3 Process Description

M24 – Metals Recycling

3.4 Waste Managed

Waste Stream Name	Chemical Name	EPA HW Numbers	Hazardous Properties	Hazardous Constituents and Degradation Compounds	Chemical Analysis
Waste Corrosive Liquids, Toxic	Sulfuric Acid	D006, D008	Corrosive Toxic	Lead Compounds Cadmium Compounds	See EMEW Soln, Attachment A
Waste Corrosive Solids, Toxic	Sulfuric Acid	D006, D008	Toxic	Lead Compounds Cadmium Compounds	See EMEW Solids, Attachment B
Hazardous Waste Solids, NOS	Cadmium, Lead	D006, D008	Toxic	Lead Compounds Cadmium Compounds	No analysis (PPE, filter bags, etc. contaminated by above waste streams)

3.5 Volume of Waste Managed

Waste Stream Name	Current Volume of Each Waste Type	Max Inventory of Waste Type since Beginning	Total Past and Total Current Volume
Waste Corrosive Liquids, Toxic	None	4500 lbs	4500 lbs
Waste Corrosive Solids, Toxic	None	900 lbs	900 lbs
Hazardous Waste Solids, NOS	None	75 lbs	75 lbs

3.6 Routing of Waste

Liquid wastes were pumped approximately 20 feet from Pilot Plant to container storage area. Solids were placed in small plastic containers, weighed and dumped into large plastic container in storage area. PPE, filter bags etc. were placed in a 55-gallon drum.

3.7 Size/Volume of Each Unit

The Pilot Plant produced 100 L batches of extracted solution and solids that were filtered through a plate and frame press. Liquids were conveyed to a 100 L plastic tank, sampled and when released transferred by pump and chemical hose to a 1000 L plastic tank on a drip pad. The solids were collected from the five (5) leaves of the filter press during cleanout into a 2 gallon plastic container. After sampling the solids were deposited in the large plastic container in the storage area.

3.8 Time Period Used

The Pilot Plant and subsequent generation of process solutions and solids occurred during approximately four monthly periods from the fall of 2005 until late Spring 2007.

3.9 Prior Use of HWMU Area

The HWMU area was used by Chemetco until they shutdown on October 31, 2001 for refractory relining of chutes and metl pots. From November 1, 2001 until the fall 2005, when the Pilot Plant was started up, the HWMU area was vacant space in an unused building.

3.10 Scaled Drawing of HWMU Area

Dimensions: 50' wide by 80' long by 20' high (Brick Shop Drawing, Figure 4)

Drains, etc.: No sumps, trenches, drains or other similar structures that would provide pathways out of the Brick Shop.

HWMU Drainage: The floor in this area is essentially flat.

Containment: No containment is present inside the Brick Shop expect Chemetco used absorbent pigs as containment in part of the storage area and across the rollup door opening during processing to prevent potential of any internal release going outside.

Cracks, etc.: As shown in Figure 4, cracks do exist along joints in the container storage area that appear greater than ¼ inch.

3.11 Material Underlying HWMU

There is no known evidence of exactly what underlies the HWMU or any other structures on the Chemetco facility. It is understood from others, that the floor of the Brick Shop is probably 8" thick steel rebar reinforced concrete slab over a foundation of slag over the native clay soils.

3.12 *Photograhs of HWMU Before Cleanup*

As shown on Photograph #1 (note orientation on Figure 4), is the container storage area prior to cleanup and shows the west side of the area, whereas Photograph #2 shows the east side. Photograph #3 shows the small drip/spill that has crystallized under the valve on the tank. Photograph #4 shows the Pilot Plant.

4.0 Closure Activities

4.1 Remediation

4.1.1 Objectives

Remove any potential contaminates from surface of concrete by pressure washing the container storage area. Insure that joints are sealed and will not allow releases to penetrate to the soil below. Remediation

4.1.2 Remedial Activities

A professional engineer will oversee the following activities to obtain closure:

1. Pressure wash container storage area three times. Collect all wash waters and dispose according to RCRA.
2. Inspect joints for integrity. If not seal, repair or remove and replace joint sealant.
3. Upon completion of the above, submit Certification of Closure.

4.2 Estimated Costs

The cost of completing the work to clean close the container storage area by a third party is expected to be between $ 5,000 and $7,500.

4.3 Schedule

Upon approval of this closure plan, Chemetco estimates that the time to complete the closure activities and execute the Certificate of Closure will take 30 – 45 days depending on weather (concrete floors have to be dry and warm for most epoxy coatings).

5.0 Status of Facility After Closure

Chemetco has no plans to use the container storage area after closure; however they do consider it be as available as any other part of the Brick Shop for future use.

6.0 Certification/Signatory Requirements

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 1/31/08

Signed by: Laura K. Grandy

Position: Trustee

Estate of Chemetco, Inc.

ATTACHMENT A
WASTE ANALYSES

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

December 23, 2005

Gary Davis
Chemetco
3574 Chemetco Lane
Hartford, IL 62048
TEL: (618) 254-4381
FAX: (618) 254-0138

ACCREDITED IN ACCORDANCE WITH nelac
NELAP Accredited #100226

RE: MFC-EMEW

OrderNo. 05120019

Dear Gary Davis:

TEKLAB, INC received 3 samples on 12/1/2005 11:05:00 AM for the analysis presented in the following report. A list of report contents can be found on the following page.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Client: Chemetco
Project: MFC-EMEW
LabOrder: 05120019
Report Date: December 23, 2005

REPORT CONTENTS

This reporting package includes the following:

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Client: Chemetco
Project: MFC-EMEW
LabOrder: 05120019
Report Date: December 23, 2005

CASE NARRATIVE

Cooler Receipt Temp 16.4/Iced

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below reporting limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	* - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	Slag Wash-Caustic 2005
Lab ID:	05120019-001	**Collection Date:**	12/1/2005 10:35:00 AM
Report Date:	23-Dec-05	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
ASTM D2974								
Percent Moisture		0.1		**78.5**	%	1	12/8/2005	CDH
EPA 600 150.1								
pH	NELAP	1.00		**2.11**		1	12/1/2005 1:16:00 PM	NMP
EPA 600 325.3 (TOTAL)								
Chloride	NELAP	3		**40100**	mg/L	1	12/7/2005	NNH
EPA 600 340.2 (TOTAL)								
Fluoride	NELAP	0.20		**0.35**	mg/L	2	12/7/2005	MLD
STANDARD METHODS 18TH ED. 2540 G								
Total Solids		0.1	H	**21.5**	%	1	12/8/2005	CDH
SW-846 3050B, 6010B, METALS BY ICP								
Aluminum	NELAP	4.63		**1750**	mg/Kg-dry	1	12/7/2005	SAM
Arsenic	NELAP	2.31	J	**1.44**	mg/Kg-dry	1	12/8/2005 1:48:10 PM	CRK
Barium	NELAP	0.46		**79.3**	mg/Kg-dry	1	12/7/2005	SAM
Beryllium	NELAP	0.09		**8.34**	mg/Kg-dry	1	12/7/2005	SAM
Boron	NELAP	1.85		**43.7**	mg/Kg-dry	1	12/7/2005	SAM
Cadmium	NELAP	0.19		**7.09**	mg/Kg-dry	1	12/7/2005	SAM
Calcium	NELAP	92.6		**2090**	mg/Kg-dry	20	12/13/2005 10:41:20 AM	SAM
Chromium	NELAP	0.93		**15.2**	mg/Kg-dry	1	12/8/2005 1:48:10 PM	CRK
Cobalt	NELAP	0.93		**15.1**	mg/Kg-dry	1	12/7/2005	SAM
Copper	NELAP	0.93		**1780**	mg/Kg-dry	1	12/7/2005	SAM
Iron	NELAP	1.85		**20700**	mg/Kg-dry	1	12/7/2005	SAM
Lead	NELAP	3.70		**1340**	mg/Kg-dry	1	12/7/2005	SAM
Magnesium	NELAP	0.93		**564**	mg/Kg-dry	1	12/7/2005	SAM
Manganese	NELAP	0.46		**235**	mg/Kg-dry	1	12/7/2005	SAM
Molybdenum	NELAP	0.93		**11.4**	mg/Kg-dry	1	12/7/2005	SAM
Nickel	NELAP	0.93		**82.1**	mg/Kg-dry	1	12/7/2005	SAM
Potassium	NELAP	9.26		**246**	mg/Kg-dry	1	12/7/2005	SAM
Selenium	NELAP	3.70		**< 3.70**	mg/Kg-dry	1	12/7/2005	SAM
Silver	NELAP	0.93		**< 0.93**	mg/Kg-dry	1	12/7/2005	SAM
Sodium	NELAP	463		**333000**	mg/Kg-dry	100	12/15/2005 10:05:37 AM	SAM
Thallium	NELAP	4.63		**< 4.63**	mg/Kg-dry	1	12/7/2005	SAM
Tin	NELAP	1.85		**466**	mg/Kg-dry	1	12/7/2005	SAM
Vanadium	NELAP	0.93		**< 0.93**	mg/Kg-dry	1	12/12/2005 10:58:20 AM	CRK
Zinc	NELAP	18.5		**7350**	mg/Kg-dry	20	12/13/2005 10:41:20 AM	SAM
SW-846 7471A								
Mercury	NELAP	0.092		**3.50**	mg/Kg-dry	2	12/8/2005	SRH

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	Slag Wash-Caustic 2005
Lab ID:	05120019-001	**Collection Date:**	12/1/2005 10:35:00 AM
Report Date:	23-Dec-05	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst

Sample Narrative

Standard Methods 18th Ed. 2540 G

* Sample required re-analysis outside of hold time due to the caustic/reactive nature of the sample

ASTM D2974

* Sample required re-analysis outside of hold time due to the caustic/reactive nature of the sample

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COLLINSVILLE, ILLINOIS 62234

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TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	EMEW Soln-W 2005
Lab ID:	05120019-002	**Collection Date:**	12/1/2005 10:15:00 AM
Report Date:	23-Dec-05	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
EPA 600 150.1								
pH	NELAP	1.00		1.02		1	12/1/2005 1:17:00 PM	NMP
EPA 600 245.1 (TOTAL)								
Mercury	NELAP	0.00200		0.0870	mg/L	10	12/7/2005	SRH
EPA 600 325.3 (TOTAL)								
Chloride	NELAP	3		1210	mg/L	1	12/7/2005	NNH
EPA 600 340.2 (TOTAL)								
Fluoride	NELAP	0.20		12.9	mg/L	2	12/7/2005	MLD
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Aluminum	NELAP	5.00		636	mg/L	100	12/7/2005	SAM
Antimony	NELAP	5.00		40.7	mg/L	100	12/7/2005	SAM
Arsenic	NELAP	0.0250		1.53	mg/L	1	12/12/2005 3:35:41 PM	CRK
Barium	NELAP	0.0500		< 0.0500	mg/L	10	12/15/2005 10:20:13 AM	SAM
Beryllium	NELAP	0.100		1.74	mg/L	100	12/7/2005	SAM
Boron	NELAP	2.00		24.6	mg/L	100	12/7/2005	SAM
Cadmium	NELAP	0.200		326	mg/L	100	12/7/2005	SAM
Calcium	NELAP	5.00		433	mg/L	100	12/7/2005	SAM
Chromium	NELAP	0.0100		3.22	mg/L	1	12/12/2005 3:35:41 PM	CRK
Cobalt	NELAP	1.00		3.59	mg/L	100	12/7/2005	SAM
Copper	NELAP	1.00		2720	mg/L	100	12/7/2005	SAM
Iron	NELAP	2.00		5930	mg/L	100	12/7/2005	SAM
Lead	NELAP	4.00		65.8	mg/L	100	12/7/2005	SAM
Magnesium	NELAP	1.00		198	mg/L	100	12/7/2005	SAM
Manganese	NELAP	0.500		85.2	mg/L	100	12/7/2005	SAM
Molybdenum	NELAP	1.00		5.24	mg/L	100	12/7/2005	SAM
Nickel	NELAP	1.00		67.4	mg/L	100	12/7/2005	SAM
Potassium	NELAP	1.00		56.2	mg/L	10	12/15/2005 10:20:13 AM	SAM
Selenium	NELAP	0.500		< 0.500	mg/L	10	12/15/2005 10:20:13 AM	SAM
Silver	NELAP	0.100		< 0.100	mg/L	10	12/15/2005 10:20:13 AM	SAM
Sodium	NELAP	5.00		1430	mg/L	100	12/7/2005	SAM
Thallium	NELAP	0.500		< 0.500	mg/L	10	12/15/2005 10:20:13 AM	SAM
Tin	NELAP	2.00		592	mg/L	100	12/7/2005	SAM
Vanadium	NELAP	0.100		1.18	mg/L	10	12/15/2005 10:20:13 AM	SAM
Zinc	NELAP	10.0		9060	mg/L	1000	12/15/2005 10:25:19 AM	SAM

Sample Narrative
EPA 600 4.1.4, 200.7R4.4, Metals by ICP (Total)
Ba, Se, Ag, Tl - elevated detection limit due to matrix interefernce

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Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	EMEW Soln-W 2005
Lab ID:	05120019-002	**Collection Date:**	12/1/2005 10:15:00 AM
Report Date:	23-Dec-05	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	EMEW Solids 2005
Lab ID:	05120019-003	**Collection Date:**	12/1/2005 9:53:00 AM
Report Date:	23-Dec-05	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
ASTM D2974								
Percent Moisture		0.1		**53.8**	%	1	12/5/2005	CDH
STANDARD METHODS 18TH ED. 2540 G								
Total Solids		0.1		**46.2**	%	1	12/5/2005	CDH
STANDARD METHODS 18TH ED. 4500-CL C								
Chloride	NELAP	52		**3560**	mg/Kg-dry	1	12/7/2005	NNH
SW-846 3050B, 6010B, METALS BY ICP								
Aluminum	NELAP	5.00		**2990**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Antimony	NELAP	5.00		**168**	mg/Kg-dry	1	12/22/2005 4:00:05 PM	SAM
Arsenic	NELAP	2.50		**27.3**	mg/Kg-dry	1	12/8/2005 1:50:27 PM	CRK
Barium	NELAP	0.50		**239**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Beryllium	NELAP	0.10		**6.72**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Boron	NELAP	2.00		**73.7**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Cadmium	NELAP	0.20		**695**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Calcium	NELAP	50.0		**1910**	mg/Kg-dry	10	12/13/2005 11:03:22 AM	SAM
Chromium	NELAP	1.00		**88.6**	mg/Kg-dry	1	12/8/2005 1:50:27 PM	CRK
Cobalt	NELAP	1.00		**14.5**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Copper	NELAP	10.0		**11000**	mg/Kg-dry	10	12/13/2005 11:03:22 AM	SAM
Iron	NELAP	2.00		**23000**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Lead	NELAP	40.0		**16400**	mg/Kg-dry	10	12/13/2005 11:03:22 AM	SAM
Magnesium	NELAP	1.00		**857**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Manganese	NELAP	0.50		**277**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Molybdenum	NELAP	1.00		**52.5**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Nickel	NELAP	1.00		**384**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Potassium	NELAP	10.0		**215**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Selenium	NELAP	4.00		**< 4.00**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Silver	NELAP	1.00		**9.07**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Sodium	NELAP	5.00		**4020**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Thallium	NELAP	5.00		**< 5.00**	mg/Kg-dry	1	12/13/2005 10:46:07 AM	SAM
Tin	NELAP	20.0		**5240**	mg/Kg-dry	10	12/13/2005 11:03:22 AM	SAM
Vanadium	NELAP	1.00		**5.51**	mg/Kg-dry	1	12/22/2005 3:40:52 PM	SAM
Zinc	NELAP	10.0		**22200**	mg/Kg-dry	10	12/13/2005 11:03:22 AM	SAM
SW-846 7471A								
Mercury	NELAP	0.022	J	**0.010**	mg/Kg-dry	1	12/8/2005	SRH
SW-846 9045C								
pH (1:1)	NELAP	1.00		**1.94**		1	12/7/2005 11:05:00 AM	NMP
SW-846 9214								

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Chemetco	**Client Project:**	MFC-EMEW
WorkOrder:	05120019	**Client Sample ID:**	EMEW Solids 2005
Lab ID:	05120019-003	**Collection Date:**	12/1/2005 9:53:00 AM
Report Date:	23-Dec-05	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 9214								
Fluoride	NELAP	2.16		**44.8**	mg/Kg-dry	1	12/7/2005	MLD

Sample Narrative

ATTACHMENT B
PHOTOGRAPHS

Container Storage Area
Photographs

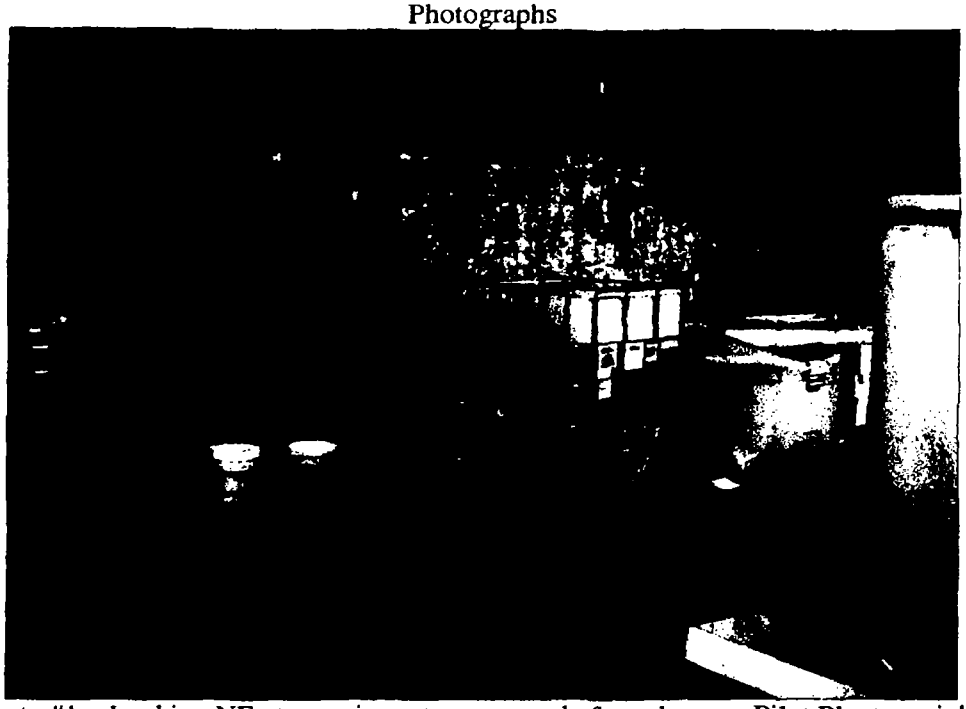


Photo #1 – Looking NE at container storage area before cleanup, Pilot Plant on right. (3/8/07)

Photo #2 – Looking north at container storage area with solution tote and tank on left and solid waste box on right (3/8/07)

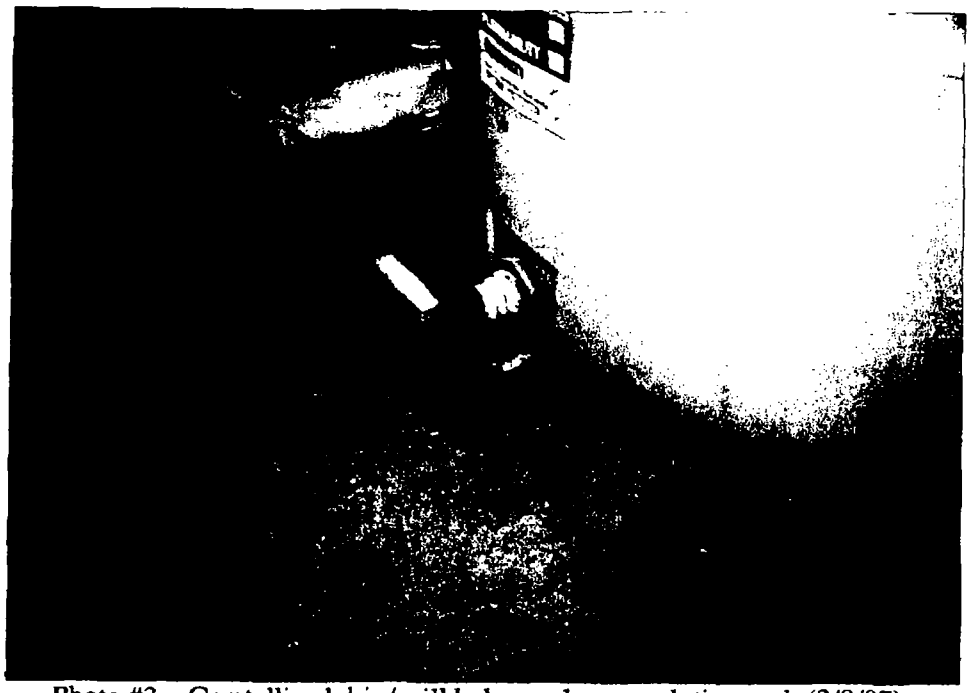


Photo #3 – Crystallized drip/spill below valve on solution tank (3/8/07).

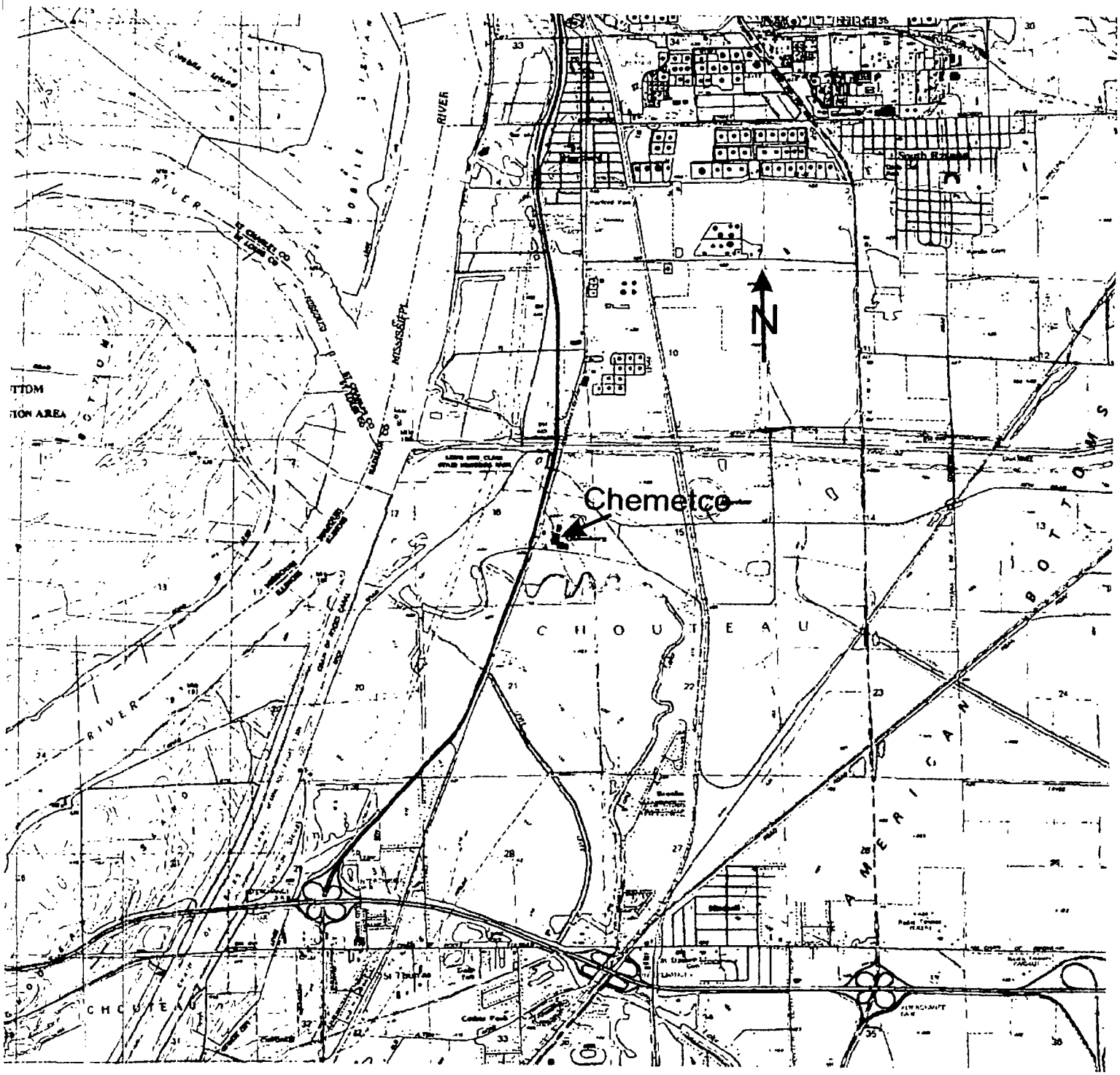
Photo #4 – Looking NW at Pilot Plant with container storage area on the right (3/8/07)

FIGURES

Figure 1

Location of Chemetco on Topographic Map

(Scale: 1" ~ 1495')



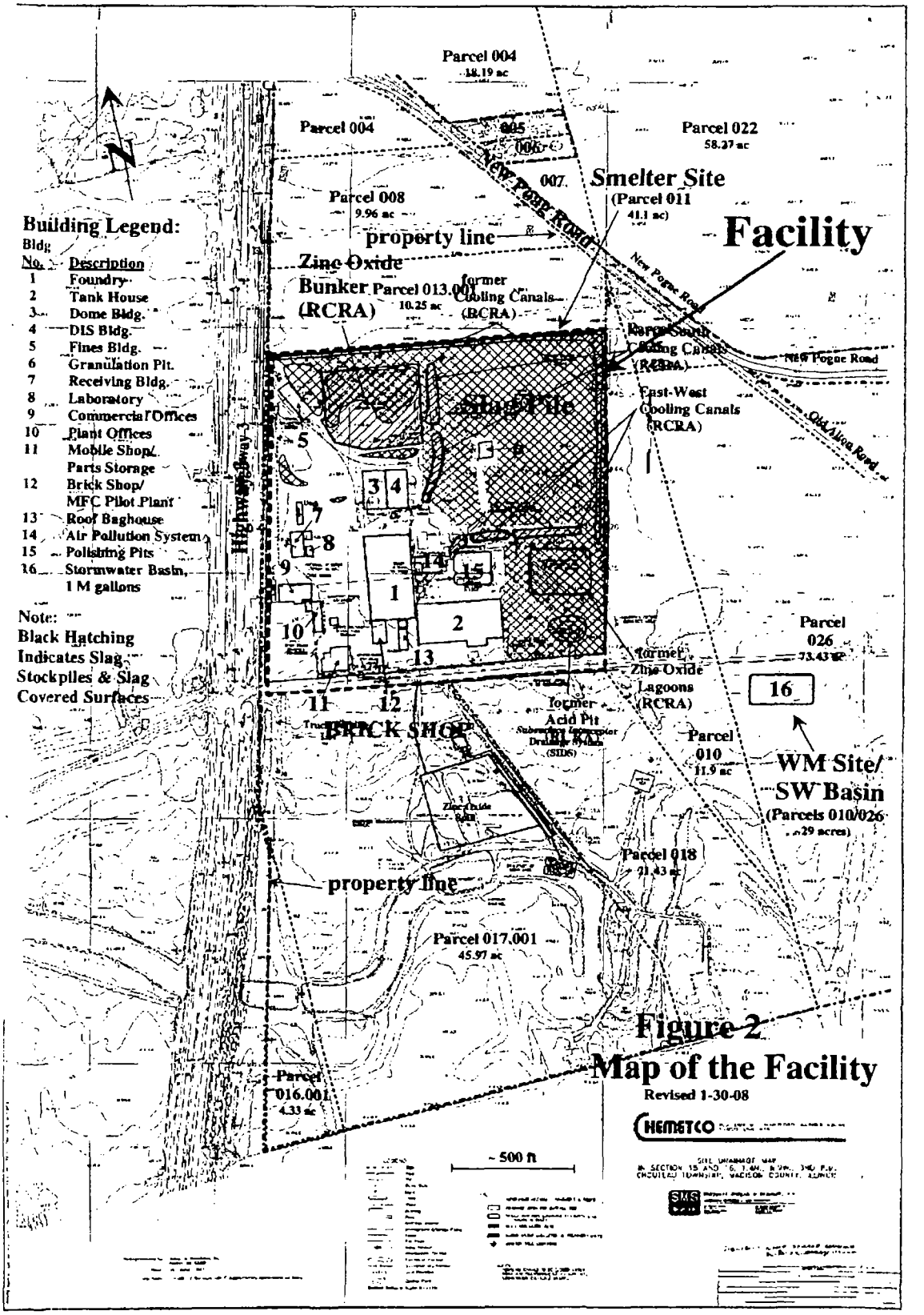

Building Legend:
Bldg No. Description
1 Foundry
2 Tank House
3 Dome Bldg.
4 DIS Bldg.
5 Fines Bldg.
6 Granulation Plt.
7 Receiving Bldg.
8 Laboratory
9 Commercial Offices
10 Plant Offices
11 Mobile Shop/ Parts Storage
12 Brick Shop/ MFC Pilot Plant
13 Roof Baghouse
14 Air Pollution System
15 Polishing Pits
16 Stormwater Basin, 1 M gallons
Note:
Black Hatching Indicates Slag Stockpiles & Slag Covered Surfaces
Parcel 004
18.19 ac
Parcel 004
Parcel 022
58.27 ac
New Pogue Road
Smelter Site
(Parcel 011
41.1 ac)
Facility
Parcel 008
9.96 ac
property line
Zinc Oxide
Bunker
(RCRA)
Parcel 013.001
10.25 ac
former
Cooling Canals
(RCRA)
Parcel South
Cooling Canals
(RCRA)
New Pogue Road
East-West
Cooling Canals
(RCRA)
Old Alton Road
Slag Pile
Highway 3
BRICK SHOP
former
Zinc Oxide
Lagoons
(RCRA)
Parcel
026
73.43 ac
16
former
Acid Pit
Parcel
010
11.9 ac
WM Site/
SW Basin
(Parcels 010/026
29 acres)
Parcel 018
21.43 ac
property line
Parcel 017.001
45.97 ac
Parcel
016.001
4.33 ac
~ 500 ft
Figure 2
Map of the Facility
Revised 1-30-08
HEMETCO

Figure 3
Brick Shop
Container Storage Area
(Scale: 1" ~ 135')

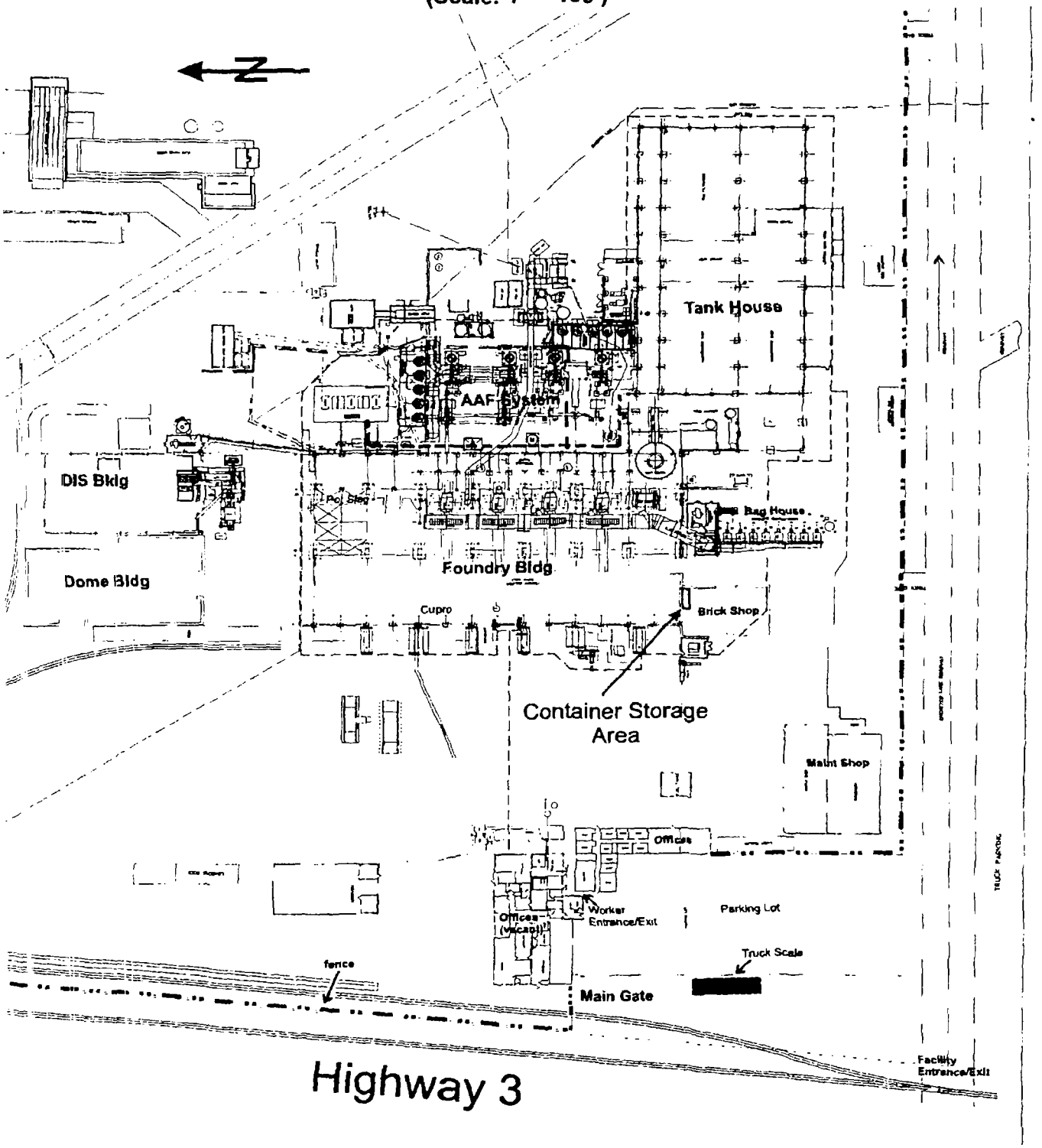


Figure 4

Brick Shop Drawing
w/Photo Locations
(Scale: 1" ~ 20')